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January 11, 2007

**Kentucky Environmental Quality Commission
Public Forum**

Meeting Minutes

November 13, 2006

Kentucky Farm Bureau State Office
Louisville, Kentucky

EQC Commissioners Present

Lindell Ormsbee, Chair
Gordon Garner, Vice Chair
Karen Deaton
Rebecca Farris
Andrew Ernest
Laura Knoth
Eugene Zick

Speakers/Representatives Present

Dr. Robert Jacobs, University of Kentucky
Dr. Bernhard Henning, University of Louisville
Dr. Lisa Gaetke, University of Louisville
Tim Hubbard, Division of Waste Management

Commissioners absent

None

EQC Staff Present

Jo Hargis, Executive Director
Johnna McHugh, Director of Operations

The Environmental Quality Commission (EQC) held a public forum on November 13, 2006, for the purpose of discussing environmental health issues in the commonwealth. There were approximately 26 present in the audience. The meeting was called to order at 6:30 p.m. Dr. Ormsbee gave an overview of the EQC and its mandate and introduced the audience to the focus topic of environmental health.

Next, Dr. Robert Jacobs, professor at the University of Louisville's School of Public Health, discussed current research projects that might be relevant to environmental health issues in Louisville. Dr. Jacobs discussed aldehydes, particulates, nanoparticles, the Green Cities program and the Center for Health Hazards Preparedness.

Dr. Bernhard Hennig, professor of nutrition and toxicology with the University of Kentucky, discussed research projects within the Superfund Basic Research Program. He gave a brief review of Kentucky's Superfund sites, and discussed polychlorinated biphenyls (PCBs) and other organic pollutants and how they relate to cardiovascular toxicity.

Dr. Lisa Gaetke, associate professor of nutrition and food science with the University of Kentucky, discussed using nutrition to combat the effects of exposure to Superfund pollutants. She discussed the organization Superfund Community Action through Nutrition (SCAN), which teaches affected communities about antioxidants, spices and increasing fruit and vegetable intake in the diet.

Mr. Tim Hubbard from the Division of Waste Management then gave an overview of the state-led Superfund program. He gave a brief overview of the National Priorities List sites in Kentucky and discussed how the division receives and spends the Hazardous Waste Management Fund.

The floor was then opened for questions.

Colleen Kaylen: Dr. Jacobs, are you planning on conducting studies on the effect of particulates on cancer, particularly lung cancer?

Dr. Jacobs: At this time, no. The school's Department of Epidemiology is doing some work, but not focused specifically on particulates and cancer.

Eboni Cochran: Regarding contacting parents about absenteeism and asthma, I think this is a great idea to help parents as best as they can. But when you have schools close to Rubbertown, that have to have air monitoring equipment because of Rubbertown with high levels of chemicals, then there has to be discussions with chemical companies and regulatory agencies who aren't doing a very good job monitoring what's coming out of the stacks. There have been several spills recently: hydrochloric acid, butadiene, chlorine. It's a good thing to talk about prevention, but there is also a need to get active in enforcing the laws with the chemical plants not keeping their facilities up to date.

Dr. Jacobs: I agree. We do need to take those steps to enforce the regulations on the books and do as much as we can to reduce those types of exposures. Having said that, we need to find out what proportion of absenteeism in Jefferson County schools is related to asthma and see if there are interventions we can work with on a family-to-school basis. This doesn't mean that we would any way neglect the other issues that relate to the development of asthma, and certainly that's environmental pollutants. I certainly did not mean to infer that at all.

Steve Samuels: I'm a member of the REACT group and live in the West End. My concern is that there are no fruits that can be grown in the West End. Also, there are no gardens. You can't grow gardens down there. You talk about nutrition, but I'd be scared to eat anything that came out of a garden. We get a lot of chemicals coming from the Rubbertown area. We have a new STAR program, but we have yet to get any results because of hiring practices. There's money provided by EPA to get new fence line monitoring equipment, but we haven't seen anything from that. Basically, I want to see some results. I just wanted to put that out there. You know, this 1,3-butadiene is really serious. It doesn't take much to cause cancer and there are 3 companies out there in Rubbertown who use it.

Dr. Jacobs: I agree, the air toxics implementation needs to go into place. I think it's a very valid regulation, and I hope we move forward on that rather quickly. One of the things from a public health perspective, and I think the persons involved in nutrition would agree, would be to

advocate more fruits and vegetables in the supermarkets in the West End. That's a chronic problem across this country. There needs to be some kind of advocacy to enhance availability.

Dr. Hennig: It's a very interesting paradigm. You mention some contaminated areas where you would not want to grow fruits and vegetables, and I agree with you, even though those types of foods may be very protective. It's a real dilemma that you have to get them from other places.

Dr. Gaetke: I recognize, too, that fresh fruits and vegetables are expensive. That doesn't always figure into everyone's budget by the end of the month. So we have to look to other sources, too. I'm interested in the soil – you really couldn't grow anything there? Have people tried?

Steve Samuels: People have tried. It's been over the past 5 or so years that you could grow a vegetable garden. But right now, you can't grow a fruit tree. And like I said, I wouldn't trust eating vegetables out of this ground, unless we have Browns come check the earth, and that gets expensive.

Dr. Gaetke: I think that's a great point. We tried to do a garden study around the Paducah area. We didn't get great results. But you're reporting you can't even get them to grow.

Tim Hubbard: Unfortunately, I don't have a lot to add to that. We do have a few sites in the Rubbertown area that we've been involved with in terms of clean-up. Most of those sites are active sites. I guess they're working with the Jefferson County Air Pollution District to maintain compliance with the permits, but in terms of sites we've been involved with, I couldn't really speak to that. I know we've done some investigations and worked on some clean-ups in the Lake Dreamland area several years ago.

Steve Samuels: I'm familiar with that area. MSD was dumping their waste down on 34th Street, but that area now is where they're building brand new homes. I don't believe all that ground has been cleared out as far as waste management is concerned. They put a few rocks and stuff over it, then the construction people came in. It looks pretty good, but I wouldn't trust living over it myself. Just talking to the people and dealing with the city government, too, this is a constant fight. I'm always into it with the Air Pollution Board. It's just not right - people are people. Just because you're making money off these companies in Rubbertown – millions of dollars in taxes – don't kill all the people in the area because you're making money for the people uptown. It's just not right.

Gordon Garner: I'd like to ask Dr. Hennig – are PCBs, despite the fact that we don't make them in the US anymore, still the biggest risk in terms of the bad chemicals out there? And how are these PCBs finding their way back to us? You mentioned chicken and fish, does that mean we need to eat more beef and pigs? What's happening with these PCBs from past uses? Is it logical that maybe in Rubbertown where there were a lot of past uses that maybe there's a reservoir hanging around? How are they getting to us these days?

Dr. Hennig: Because they're not being produced anymore, the overall levels of PCBs worldwide are decreasing. That's very good news. However, they are very persistent compounds. They show up in very remote areas where PCBs weren't used because they're airborne. The reason fish came up is because they are found in the water supply, and fish tend to consume algae and other fish, so some of the larger fish have higher levels of PCBs. But worldwide the levels are decreasing.

Gordon Garner: How do they show up in chickens? I hadn't thought about chickens as a PCB issue.

Dr. Hennig: Very often, the diet chickens receive is fishmeal, so that's probably their exposure.

Gordon Garner: So we're recycling PCBs through the foodchain.

Lindell Ormsbee: PCBs have been used historically in all kinds of things, so it's not like they were just used in one chemical application.

Al Westerman: PCBs are still in use in transformers.

Gordon Garner: I thought there was a sunset on production.

Al Westerman: There was a sunset on production in this country. But for those transformers that were already being used, they're still there if they haven't been taken out. They're allowed to use them until they collapse.

Al Westerman: Are PCBs differentially accumulating in the vascular tissue? Is that what you were saying?

Dr. Hennig: PCBs because of their nature tend to accumulate in fatty tissue in animals. Through this homeostasis of PCBs being stored in certain tissues and because of metabolic changes being transported and released, there are always some PCBs in the plasma. Of course, it is unethical to do work with humans, but from research with animals, it is clear that exposure to these persistent organic pollutants have a tremendous effect on the vascular biology.

Lindell Ormsbee: Another thing to remember about PCBs is that it's not a single chemical, it's a soup of over 200 different molecules, and I think that what the researchers have learned is that some molecules are much more toxic than others. It gets a little complicated.

Andy Ernest: I have a question for probably one of the folks from the state. In terms of human health and risk to human health, what is the number one contaminant or National Priority contaminant of issue here in Kentucky? Is it an air toxic? Nanoparticles? PCBs?

Tim Hubbard: There are a variety of contaminants that we've found in Superfund sites. We find a whole lot of lead. Obviously, lead is very common just because of the myriad sources of lead: lead-based paint, leaded gasoline, and various other sources. We see a lot of chlorinated solvents contaminating our sites, too. It could be drycleaning fluid (perchloroethylene), trichloroethene (a common degreasing fluid), benzene (from gasoline contamination), and PCBs. It's just from the sources that were used historically. Even though they're not manufactured anymore, there are still those units – transformers, compressors – still have PCBs in them. I don't know if I could point to a particular compound.

Andy Ernest: I'm assuming that, in terms of clean-up not necessarily in terms of prevention, you all use some sort of risk-based method to prioritize. Is it based on proximity, population numbers, things like that?

Tim Hubbard: Yes, we do prioritize the sites based on the toxicity of the chemical of concern and population density. It's basically the same factors that EPA uses as far as scoring the sites for Superfund.

Andy Ernest: Is there any coordination between the EPPC departments and folks in the Health and Human Services cabinet at all in terms of doing human health impacts and potential risk indices?

Tim Hubbard: I'll add my two cents, and Dr. Jacobs can if he wants. I know that on a site-by-site basis, we do coordinate with the Department of Public Health, particularly if it's a site with lead contamination, we do plug them in. Particularly if there's at-risk children living there or near there. I know we've worked with Colleen Kaelin before on lead sites, actually the Briar Hill Landfill in Scott County, we worked with them to do lead testing (blood testing) on the children and adults there. We do plug them in on a site-by-site basis, as needed.

Dr. Jacobs: I was just going to offer a little bit of a different perspective on your first question, on what drives a lot of the research. It's not so much substance-specific as it is disease outcome-specific. And because cardiovascular disease, respiratory disease, and asthma are at such high levels in this country and on a global basis, there's a lot of effort in trying to determine what proportion of those disease outcomes are related to environmental outcomes and exposures. So when we make a list, at least in our research area, we are more focused on disease outcome and what contributes to that. We find that a little bit easier to work with, in terms of trying to sort this out, than taking a specific agent. When we're looking at specific agents, we have to be very careful, because when you're looking for an outcome, you can almost always find an outcome depending on what assay you choose to use. We have to be very careful of that as researchers.

Andy Ernest: In terms of looking at human health, and I do agree with you on separating out the effect from the source because you can have multiple sources contributing to a single effect, and from a human health perspective, you're looking primarily at the health effect not necessarily what the impacts are. On the other hand, the regulatory agencies are critically driven by source because it's not only an issue of cleanup, but more importantly it's a pollution prevention or environmental protection type of issue. Is there a relationship (and I'm making a linkage here which you've already disavowed) between the risk driven by a particular source or type of contaminate or pollutant alongside population demographics: age, culture, eating habits, those kinds of things? Is there something specific to Kentucky that is not necessarily reflective of the nation as a whole?

Dr. Hennig: Kentucky, unfortunately, has some very sad statistics in many ways. We have a very high risk of numerous age-related or chronic diseases including cardiovascular, diabetes, or obesity. And a lot of it has to do with unhealthy lifestyles. Looking at it as a scientist, if I lead an unhealthy lifestyle, I may be at higher risk to some of these diseases, and if I'm at the same time exposed to another risk factor such as an environmental pollutant, am I developing a certain disease at a more rapid pace than if I were leading a more "healthy" lifestyle? These are very important questions, and we know very little about this. This deserves much more research.

Dr. Jacobs: Kentuckians are no different from any other state in the country. I would say that economic choices that the state has made and that an individual has made, such as tobacco and coal-fired power plants, may have put Kentuckians at a differential risk because of some of those decisions, but Kentuckians are no different than anyone else.

Andy Ernest: I'd like to say one more thing. If I say more, I'm going to explode. I personally think that it would be of great value to the commonwealth if we were to have some sort of state-wide strategic plan for addressing priority contaminant-driven health effects. Which means doing especially what we just said a health person shouldn't be doing, which is looking at where we get the most bang for our buck in terms of clean-up and pollution prevention. I would bet a dollar against a hundred that if we were to fix our coal-fired power plants that we would go a long way, rather than fixing the 'sexy' contaminants like PCBs and so on.

Lindell Ormsbee: I'm really curious as to the issue with the transformers. Do we have any idea how many 'rogue' transformers are out there?

Bruce Scott: We don't know.

Lindell Ormsbee: Do we have an estimate?

Bruce Scott: We really don't. The sad reality that Tim alluded to in his talk is that we have people climbing up transformers and stealing them while they're live in order to get the copper. We've actually had a couple of people die that way. PCBs, as you are aware, last for decades in

terms of their utility, and refrigerators, etc. show up in landfills and dumps and leak out into the environment. We just don't really know. The persistency of the chemical itself, even once it's banned, it's going to be in the environment for some extended period of time. The good news is that it is a lessening of what it once was, but that in no way means it's not a big issue.

Steve Samuels: I'd like to pass on a comment to the Louisville health department here. We've got a vehicle coming in that's been ordered that they'll be taking around in the community and checking people's health. I'd like to commend them on that.

Lindell Ormsbee: I'd like to throw this question out to the audience. One of the things that the EQC is interested in is in following up on the presentations and comments. What are some specific things that we as a commission might be able to do to promote a healthier environment and enhance human health? Andrew has already alluded to one issue - to some contaminants that may be ubiquitous across the state, but nevertheless have some sources that we know where they're coming from that may be having some impacts. I'm a little concerned from a policy standpoint of some of the erosion of the funding from the Superfund program. I think by inference from the comments Tim made relative to the erosion of the types of chemicals that are under the basis for generating those funds. Does anyone have any suggestions beyond just discussion - some things that we might formulate by way of recommendations to the Cabinet or to other parties in state government or local government or the research community here, where we might be able to provide some linkages between groups or some synergisms that might actually start to move this toward some solutions?

Bruce Scott: Let me mention one thing off the top of my head. At least over a year or two ago, we've partnered with the Department of Public Health as well as the Education folks on mercury. It never ceases to amaze me - we send out flier after flier about mercury, yet it always shows up in someone's lunchbox and it gets released in someone's school. We have mercury collection programs that we're trying to promote. It's an easy fix. Let me give you an analogy to that: We spend hundreds and hundreds of dollars trying to reduce mercury emissions from coal-fired electric power plants yet we can go collect mercury from one dentist's office that on a market-scale and air quality basis is worth millions of dollars. We can go collect from a dentist's office that same amount - that same poundage of mercury. To the extent we can get out some education - to say, "People, bring your mercury in and get rid of it," it's a good thing. We've tried to partner with Public Health and Education, and I would encourage you to continue to do so. On the matter of the Hazardous Waste Management Fund Fee, we will be seeking reauthorization of that in the 2008 legislative session. I know there's a lot of interest in this issue, particularly from the industry that has to pay that fee, there always has been, and I think that will have a heightened interest in '08. Looking at potential options in lieu of that fee, it's critical to the agency to fund clean-up programs, to fund our emergency response efforts. It's essential for us. I understand there are concerns with where that money comes from - a select few, if you will. I would encourage that discussion to be going on in advance of the '08 legislative session.

Lindell Ormsbee: Thank you, Bruce. As you're aware, the EQC made a recommendation a couple of years ago relative to the whole issue of mercury. I think that resulted in a task force that resulted in a report that was released just recently, in September. I think we've got that on our Web site, too, if anyone's interested in following up on that.

Eboni Cochran: I just had two suggestions to your question. One would be to really listen to the people at the fenceline of some of these facilities. For several years now, our group has been trying to get the Air Pollution Control District to draft Standard Operating Procedures for their odor investigations, since we're pretty much the front line of smelling the stuff that's coming out. Because, when we call and ask them how they conducted the investigation, basically they call the facilities and ask the facilities if something's going on at their facility. And each facility down the road says no, even though we know that something has to be happening. Recently, on October 4, there was a horrible odor, and we called several numbers. Finally, somebody did come out, which is pretty rare when we report odors. The person from the Air Pollution Control District said he sat in front of Zeon Chemicals, which he felt was the source of the odor. And after 10 minutes, he got a headache. He doesn't live in the area. So just imagine, it's floating in my backyard and I can't enjoy my backyard or come home from a hard day's work to a pleasurable scene. So listening to the fenceline people would help. Secondly, safety concerns are of an issue to me because back in June or July there was a butadiene spill. There had been a power outage because of a storm, but what actually caused the spill was that the backup system failed. This was at Zeon Chemicals, and I contacted the Louisville Emergency Management Agency. They told me that the backup system was a battery that had outlived its lifespan or was at the end of its lifespan. It lasted only 30 minutes. There was no generator. They had a battery on order that had not arrived to the facility. As somebody who lives 1.71 ground miles from Zeon Chemicals, that doesn't make me feel warm and fuzzy at all to know that it's not even in their permit that they have to have adequate back-up systems. ASR put in that thermal oxidizer that seems to be working based on the monitoring data, which is great, but if we keep having these upsets and malfunctions that push out a lot of chemicals at one time, somebody with a compromised immune system could be messed up. I have a step-daughter with asthma so that concerns me. This information that they gave us on nutrition was excellent, and that's something the community needs to know about. But we need to make sure we don't blame the people who are being bombarded with these chemicals, because sometimes there are other factors and not everybody's obese and not everybody eats the wrong meals. Those chemicals can affect you whether you're fat or skinny.

Andy Ernest: Just a quick follow-up question on that. Does the community surrounding these facilities get notified of any corrective action or enforcement action that's taken upon a facility?

Eboni Cochran: I would have to say no, just because sometimes we don't even know what question to ask or who to ask as to whether or not there's been an enforcement action that has happened. Actually, during the incidents, sirens usually do not go off, so we have to hear it on the news. The most recent hydrochloric acid spill, the siren went off in one neighborhood, but only after we had a press conference saying we had the right to know what's going on during these incidents. But to answer your question, I think it's no, not that I know of.

Andy Ernest: I know this is probably out of your area, but do you know if there's a public notification requirement for upsets or noncompliance in the Air Pollution Control area?

John Lyons: The Air Pollution Control District has regulations that require that, I know. As a matter of fact, I think they beefed that up to some extent with the STAR regulations.

Eboni Cochran: What I mean is that some people don't know where it is. I have accessed their Web site and seen some of the malfunction lists. But if you don't know where it is or if nobody tells you or educates you on where it is, then it's just as good as not having it at all.

Lindell Ormsbee: Is that the mechanism for notification? Through the web? How are citizens notified if there's an upset or something?

John Lyons: Oh, how are the citizens notified? I'm sorry, I thought you meant what are the companies responsible for.

Steve Samuels: One example of that is Zeon Chemicals had a spill in August. There's one lady that lives on that block down from Zeon who was not notified. That spill of 1,3-butadiene was out in the air at 1:30 in the morning. Nobody was up, nobody heard a signal. This lady didn't hear a signal, and she has asthma problems anyway. But this stuff was in the air for over 3 hours before the volunteer fire department got there. And when they got there, all they did was spray water over the roof of the place. The employees were subjected to that 1,3-butadiene spill. It was all out in the air. Things like this, you know....

John Lyons: There are no requirements or mechanisms other than for the real serious releases where you have "shelter in place" and 911 systems for notification of the public of routine and nonroutine releases of whatever it may be. The companies have a responsibility to report those things...

Lindell Ormsbee: To the state, you mean?

John Lyons: there's no, other than Freedom of Information requests that one might make regarding a particular company or particular time period or whatever, there's no routine information release by the Air Pollution Control District or the state agency, for that matter.

Steve Samuels: But the thing about this is that it's right in the community. One block away, and you have this 1,3-butadiene spewing out for 3 hours before the volunteer fire department or any agency gets there? Was that reported to Hazardous Materials (asked of the representatives from DWM)?

Tim Hubbard: I'm not sure about that specific incident, but normally that would be reported to the Environmental Response Team when they exceed a reportable quantity, and that's set by federal law. They are required to report those releases to ERT.

Steve Samuels: The company is responsible for reporting it, right?

Tim Hubbard: Correct.

Steve Samuels: But, basically, what was reported to the public was 162 pounds. But when it was clarified, when we saw the records from the fire department, there was over 3,000 gallons of this stuff released into the air. Now that doesn't make sense. That shows the company is covering up for some reason or another. That's not fair to the community. That's what I'm saying. There should be a penalty for you lying about how much was put out into the air, because 1,3-butadiene is hazardous.

Lindell Ormsbee: Thank you, Steve. You've definitely given us some issues that maybe we can hopefully address. Anyone else?

Arnita Gadson: I think one of the questions was, are you aware of some potential chemicals that could be #1, #2 or whatever. I think that most could agree with me that benzene and 1,3-butadiene are probably as common in high emissions release as any other chemical. I'm not saying that you don't have chemicals like chlorine which are very dangerous that may not be as high and probably much more of a health potential. But I think that to answer that question, I think that benzene and butadiene would probably be the chemicals in top quantity. There was another question that talked about the absenteeism of children. The Jefferson County Public School System already has published that the largest percentage of children absent are due to asthma and upper respiratory diseases. You can check with that. The third thing is that the MSD SEP that the state is looking at, my concern is that we have a million dollars and it was said that 30,000 people would be tested. 30,000 people – a million dollars. I think you can do the math.

It's not very much per person. We're not going to look at a lot in one person -30,000 people. To make a more substantial and more important and viable case would be to lessen the number. If you have to go with 3,000, then that's what we should go with. I understand that 30,000 is in place, and I'm very concerned about that 30,000, because I'd rather see one of quality rather than quantity. Those are the things that I think are of major concern. The other thing about the reportable releases is that I think the community should definitely be told about what is a reportable release and what is not. Every release is not a reportable release, but that does not mean that every release is not important. I think that these are the things that the community has to be made aware of. Also, in the difference in the amount – what is important, and what variables are we talking about, pounds according to the others. This is what we have to make sure the community knows about, so it is not confusing. And we can deal with things that are extremely important, and that is their health.

Lindell Ormsbee: Any other comments or questions from our commission before we close things?

Gordon Garner: I think one of the key issues for us is to recognize the resources that the state has. If we don't get the continuation of the Hazardous Waste Management Fund, even the efforts that we're able to put into it are going to go away. We're going to lose our capacity to respond and deal with things even at the level that we are now, which some of us would characterize that we're not doing enough already. If we have hundreds of potential sites out there, and I think it's more like thousands, if you look at brownfield sites and sites that are just sitting there, and if there's enough suspicion about them that nothing is happening. And it's not going to, because people won't even put the money into categorizing what's wrong with the site. They just know something is. I think we need to maybe work with the cabinet in educating the legislators, which is a constant process, on just how many of those sites are out there and what the impacts are on the people who live in the communities and on the future economic development potential of those sites. I think that's very important for us.

Rebecca Farris: Can I ask Tim or Bruce about the assessment on the wastes generated – the liquids and the solids? How are we compared to other states?

Bruce Scott: Unfortunately, I can't really give you a good answer for that. Other states have entirely different funding mechanisms, so it's not a good comparison.

Rebecca Farris: Has the rate been raised since it was enacted?

Bruce Scott: The Hazardous Waste Management Fund Fee? It's a 1980 enacted statute, so those have been set since that time. The only thing that's changed is that there's been various exemptions added to that fee as it's gone along. I'd like to reiterate what Gordon said. You can make a very strong case that a dollar invested of clean-up money will generate a fairly significant amount of money in terms of economic development. A lot of these properties don't currently pay any taxes because there's nobody there to clean the property, so there's no tax base being generated and no jobs being generated. Oftentimes they are in urban areas where there could be some opportunities. So just the economic development aspect alone merits the need for the fee, much less the environmental implications. There are multiple positives.

Rebecca Farris: Has a fee rate been recommended?

Bruce Scott: Yes, every two years we have to go before the legislature. That begs the question, why don't we authorize it for more than two years, and there're reasons why, all of which are political. We'll have to go back in the '08 session to do the reauthorization. And there's already

been discussion among some entities about reevaluating that whole thing. I anticipate there to be some discussion among people out there, and it would be healthy if there were a lot of other voices at the table.

Gordon Gardner: So what you're saying is that there are few industries, that because the fee is based on the amount of the really bad stuff that you use/generate, there are a few industries that use a lot of bad stuff and so pay more of the fees proportionately, and they consequently would like to see it adjusted so that someone else pays more and they pay less. That's hazardous materials math.

Rebecca Farris: Has there been any discussion about whether atmospheric pollution can be added? I mean, this deals with solid waste and liquids, but there's a lot of plants that release things by the pound that can be measured.

John Lyons: Rebecca, we already have air emission fees. That's how my agency is funded is through air emission fees. I think last year, companies paid somewhere in the neighborhood of \$32 a ton for their emissions.

Rebecca Farris: So that's covered somewhere else. Thank you.

Eugene Zick: How many brownfield sites have been utilized or redeveloped?

Bruce Scott: I think Tim mentioned that there were 61 sites that were major contaminated sites that were cleaned up. Of that number only a few, a handful, are being redeveloped. That being said, there are many other sites that had marginal contamination that have been redeveloped. I don't have an exact number for you, though.

Eugene Zick: What are the obstacles?

Bruce Scott: The easy obstacle is simply this: Kentucky is largely an agrarian greenfield. You don't have a lot of urban land in Kentucky, so there's not a need. The only area that we've had major brownfield development is Jefferson County. As a matter of fact, three of the sites in Jefferson County have earned Phoenix Awards, which are awards for brownfield development. So we've done it very well when we've done it. But you just don't have a big need for it, because it's easier to develop greenfield, which gets into the whole issue about planning and zoning and growth and all that type of business. That's a huge issue.

Eugene Zick: Plus the liability factor is still there, isn't it?

Bruce Scott: Well, we've added a lot of opportunity for liability protection for third parties and tax incentives have been developed. As a matter of fact, there are going to be more put on the table in the '07 session. The question really shouldn't be liability or economic nonviability. It's really a matter of where do I want to build in Kentucky? And greenfield is where it's been, for the last however many years you want to talk about.

Andy Ernest: I really did enjoy your presentation, Tim. I think it would have hammered a point a lot harder home if somehow you were able to throw in some figures that indicated cumulative health benefits or human health protected using numbers that come out of your risk management strategy. I think that would carry a lot of weight with legislators as well, in terms of the actual voting benefit of hazardous site cleanup.

Geoff Pinkerton: Now that we have all the hard science out of the way, I have a food science question. What is the nutrition or antioxidant loss when you go from fresh to dehydrated? I saw on the PowerPoint presentation that you had both fresh and dehydrated, and it seemed to apply that there was no nutrient loss, but I thought that there was.

Dr. Gaetke: I guess I don't know the answer to that. To be honest, I don't think it's that much. It might be based on serving size, in terms of equality on what you get. Like we just gave you dried cranberries. We measured out a quarter cup, I think that's a serving for dried fruit. That would be equivalent to a half cup or whatever number of cranberries would fit in a cup. I think in that sense it's proportional. In terms of spices, again I think it would be in terms of quantity. Because you use more fresh than you would dried spices. In terms of exactly how much is lost – there's some lost in water if it's a water soluble vitamin. In terms of antioxidants, I guess I don't know the exact amount.

Stephanie Jenkins: Will these presentations be on the EQC Web site?

Johnna McHugh: Once I have asked all 4 of the presenters for permission to put them on the Web site, then yes, they will be.

Lindell Ormsbee: I'd like to thank you all for coming out this evening. I think this has certainly been a stimulating discussion, and it's certainly raised some important issues for the commission to consider. We've heard several different issues that I think we can discuss and probably follow up on and develop some recommendations. Just by way of reminder, please fill in the sign in sheet. Also, don't forget the surveys on the table. As indicated, we do have several documents that may be of interest to this particular topic, and others as well. You can just Google that to get to that. We also have extra copies of the Children's Environmental Health report, which is an excellent document and excellent resource. You can take one of those if you wish. Thank you again for coming.

OTHER BUSINESS

Meeting minutes – The meeting minutes from the September 20, 2006, meeting were approved. A motion to approve was made by Laura Knoth, seconded by Andy Ernest and passed unanimously.

Potential for Regulatory Review Special Meeting – The possibility of holding an additional special meeting for the purpose of reviewing regulations was discussed. There are Division of Water and Division for Air Quality regulations coming out, but they will be through the review process by the next EQC meeting. If the commission would like to comment on the regulations earlier, a special meeting could be held. In the future, the way EQC will handle new regulations is that the staff will send the commissioners a write-up of the regulation changes/additions in time for the commissioners to ask questions or provide comments for the public meeting. The commission will then hold a vote for recommendation to reject or adopt at the next scheduled meeting. A tentative date of December 19 was set for the special meeting.

January 2007 Meeting Location/Focus Issue – Jo Hargis discussed the upcoming meeting. The focus topic will be watershed management, and the meeting will be held in Pike County. One of the focus watersheds for the Watershed Steering Committee is Elkhorn Creek in Pike County, so the meeting will be held there to bring attention to the issue. The meeting date is tentatively scheduled for January 17. All commission members are to check their calendars and let the staff know if they will be able to attend.

EQC SOKE Reference Guide – At the suggestion of Andy Ernest, the EQC staff has been compiling a reference document of the various reports published by the environmental departments and independent commissions of the EPPC. A draft version of a portion of the report was provided to the commissioners. It was suggested to add a preface page before the table of contents to explain the purpose and layout of the document.

Measures and Milestones Conference – Jo Hargis will be speaking at this conference regarding environmental trends and energy. Her presentation is available if the commissioners would like to view it.

Nomination for Agriculture Water Quality Authority – The commission was asked by the Kentucky Soil and Water Conservation Commission to nominate a potential member for the Agriculture Water Quality Authority. Eugene Zick suggested Lee Robey of Robey Farms. Andy Ernest moved to nominate Mr. Robey, Karen Deaton seconded and the motion passed unanimously.

With no further business, the meeting adjourned at 9:45 p.m.



Signed Lindell Ormsbee, Chair

January 25, 2007

Date